

SEQUENCE LISTING

<110> KYOWA HAKKO KOGYO CO., LTD

<120> Diagnostic and therapeutic agents for the diseases related monocytes and macrophages

<130> 11214WO1

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<150> H11-171709

<151> 1999-06-17

<160> 92

<170> PatentIn Ver. 2.0

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<222> (1) .. (414)

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-19      -15      -10      -5
gtc tat gcc cag ggt cag atg cag cag tct gga gct gag ctg gtg aag 96
Val Tyr Ala Gln Gly Gln Met Gln Gln Ser Gly Ala Glu Leu Val Lys
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cct ggg gct tca gtg aag ctg tcc tgc aag cct tct ggc ttc acc ttc 144
Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Pro Ser Gly Phe Thr Phe
15      20      25
agt agt aac tat ata agt tgg ttg aag cag aag cct gga cag agt ctt 192
Ser Ser Asn Tyr Ile Ser Trp Leu Lys Gln Lys Pro Gly Gln Ser Leu
30      35      40      45
gag tgg att gct tgg att tat gct gga act ggt gat gcc agc tat aat 240
Glu Trp Ile Ala Trp Ile Tyr Ala Gly Thr Gly Asp Ala Ser Tyr Asn
50      55      60
cag aag ttc aca gcc aag gcc cac gtg act gta gac aca tcc tcc agc 288
Gln Lys Phe Thr Ala Lys Ala His Val Thr Val Asp Thr Ser Ser Ser
65      70      75
aca gcc tac atg cag ttg agt agc ctg aca act gag gac tct gcc atc 336
Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Thr Glu Asp Ser Ala Ile
80      85      90
tat tac tgt gca cga cac ggg ggg gac ggc tac tgg ttt gct tac tgg 384
Tyr Tyr Cys Ala Arg His Gly Gly Asp Gly Tyr Trp Phe Ala Tyr Trp
95      100      105
ggc caa ggg act ctg gtc act gtc tct gca g
415

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Gly Gln Gly Thr Leu Val Thr Val Ser Ala
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gtc ata ata tcc aga gga caa ctt gtt ctc acc cag tct cca gca atc 96
Val Ile Ile Ser Arg Gly Gln Leu Val Leu Thr Gln Ser Pro Ala Ile
-5 -1 1 5 10
atg tct gca tct caa ggg gag aag gtc acc atg acc tgc agt gcc agc 144
Met Ser Ala Ser Gln Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser
15 20 25
tca agt gtc agt tac atg cac tgg tac cag cag aag tca ggc acc tcc 192
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Ser Gly Thr Ser
30 35 40
ccc aaa aga tgg att tat gac aca tcc aaa ctg cct tct ggt gtc cct 240
Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Pro Ser Gly Val Pro
45 50 55
gct cgc ttc agt ggc agt ggg tct ggg acc tct tac tct ctc aca atc 288
Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile
60 65 70
agc agc atg gag gct gaa gat gct gcc act tat tat tgc cag cag tgg 336
Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp
75 80 85 90
agt agt aac cca ccc acg ttc ggt gct ggg acc aag ctg gaa ctg aaa 384
Ser Ser Asn Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
95 100 105 106
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-19      -15      -10      -5
gtc cac tcc cag gct ttt cta cag cag tct ggg gct gag ctg gtg agg 96
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cct ggg gcc tca gtg aag atg tcc tgc aag gct tct ggc tac aca ttt 144
Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe
      15      20      25
atc aat tac aat atg cac tgg gta aag cag aca cct aga cag ggc ctg 192
Ile Asn Tyr Asn Met His Trp Val Lys Gln Thr Pro Arg Gln Gly Leu
      30      35      40      45
gaa tgg att gga gct att ttt cca gga aat ggt ttt act tcc tac aat 240
Glu Trp Ile Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn
      50      55      60
cag aag ttc aag ggc aag gcc aca ctg act gta gac aaa tcc tcc agc 288
Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
      65      70      75
aca gtc tac atg cag ctc cgc agc ctg aca tct gaa gac tct gcg gtc 336
Thr Val Tyr Met Gln Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val 80
      85      90
tat ttc tgt gca aga gat ggt gac tat tac ttt gac tac tgg ggc caa 384
Tyr Phe Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln
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gtc ata atg tcc aga gga caa att gtt ctc acc cag tcg cca gca atc 96
Val Ile Met Ser Arg Gly Gln Ile Val Leu Thr Gln Ser Pro Ala Ile
      -5      -1  1      5      10
atg tct gca tct cta ggg gag gag atc acc cta acc tgc agt gcc agc 144
Met Ser Ala Ser Leu Gly Glu Glu Ile Thr Leu Thr Cys Ser Ala Ser
      15      20      25
tcg agt gta agt tac atg cac tgg tac cag cag aag tca ggc act tct 192
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Ser Gly Thr Ser
      30      35      40
ccc aaa ctc ttg att tat aga aca tcc aac ctg gct tct gga gtc cct 240
Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
      45      50      55
ttt cgc ttc agt ggc agt ggg tct ggg acc ttt tat tct ctc aca atc 288
Phe Arg Phe Ser Gly Ser Gly Ser Gly Thr Phe Tyr Ser Leu Thr Ile
      60      65      70

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agc agt gtg gag gct gaa gat gct gcc gat tat tac tgc cat cag tgg 336
Ser Ser Val Glu Ala Glu Asp Ala Ala Asp Tyr Tyr Cys His Gln Trp
  75      80      85      90
agt atg tac acg ttc gga ggg ggg acc aag ctg gaa ata aaa c    379
Ser Met Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
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<210> 5
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<212> PRT
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<220>
<223>

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<210> 6
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<220>
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Ala
  17

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<210> 7
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<213> Mus musculus

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<220>
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<210> 8
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  1      5      10

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Asp Thr Ser Lys Leu Pro Ser
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Gln Gln Trp Ser Ser Asn Pro Pro Thr
1 5 9

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<400> 11
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<400> 12
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Gly
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Ser Ala Ser Ser Ser Val Ser Tyr Met His
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<210> 17

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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<210> 18

<211> 41

<212> DNA

<213> Artificial Sequence

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<400> 18
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<210> 19
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 <212> DNA
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<400> 19
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<210> 21
 <211> 19
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 <213> Artificial Sequence

<220>
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<400> 21
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<210> 22
 <211> 11
 <212> DNA
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<220>
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<400> 22
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<210> 22
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 <212> DNA
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<223> Description of Artificial Sequence: Synthetic DNA

<400> 23

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<211> 35

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

<400> 24

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<211> 94

<212> DNA

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<223> Description of Artificial Sequence: Synthetic DNA

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<211> 95

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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<210> 27

<211> 94

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

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<211> 101

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

<400> 28

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<211> 100

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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<210> 30

<211> 93

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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<210> 31

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<212> DNA

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<221> CDS

<222> (1)..(420)

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-19 -15 -10 -5
gtc tat gcc cag gtg cag ctg gtg cag tct ggg gct gag gtg aag aag 96
Val Tyr Ala Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
-1 1 5 10
cct ggc gcc tca gtg aag gtc tcc tgc aag gct tct gga tac acc ttc 144
Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
15 20 25
agc agt aac tat ata agt tgg gtg cga cag gcc cct gga caa ggg ctt 192
Ser Ser Asn Tyr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
30 35 40 45
gag tgg atg gga tgg att tat gct gga act ggt gat gcc agc tat aat 240

Glu	Trp	Met	Gly	Trp	Ile	Tyr	Ala	Gly	Thr	Gly	Asp	Ala	Ser	Tyr	Asn	
		50			55			60								
cag	aag	ttc	aca	gcc	aga	gtc	acc	att	acc	gtc	gac	aca	tcc	acg	agc	288
Gln	Lys	Phe	Thr	Ala	Arg	Val	Thr	Ile	Thr	Val	Asp	Thr	Ser	Thr	Ser	
		65			70			75								
aca	gcc	tac	atg	gag	ctg	agc	agc	ctg	aga	tct	gag	gac	acg	gcc	gtg	336
Thr	Ala	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val	
		80			85			90								
tat	tac	tgt	gcg	aga	cac	ggg	ggg	gac	ggc	tac	tgg	ttt	gct	tac	tgg	384
Tyr	Tyr	Cys	Ala	Arg	His	Gly	Gly	Asp	Gly	Tyr	Trp	Phe	Ala	Tyr	Trp	
		95			100			105								
ggc	cag	gga	acc	ctg	gtc	acc	gtc	tcc	tca	g						415
Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ser							
110					115											

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<210> 33
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<220>
 <223> Description of Artificial Sequence: Synthetic DNA

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<210> 35
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 <212> DNA
 <213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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<210> 36

<211> 95

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

<400> 36

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<210> 37

<211> 96

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

<400> 37

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<210> 38

<211> 409

<212> DNA

<213> Artificial Sequence

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<220>

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<222> (1)..(408)

<400> 38

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-19				-15					-10					-5		
gtc	cac	tcc	cag	gtg	cag	ctg	gtg	cag	tcc	gga	gct	gag	gtg	aag	aag	96
Val	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	
		-1	1				5				10					
cct	ggg	gcc	tca	gtg	aag	gtc	tcc	tgc	aag	gct	tct	gga	tac	acc	ttc	144
Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	
	15					20				25						
att	aat	tac	aat	atg	cac	tgg	gtg	cga	cag	gcc	cct	gga	caa	ggg	ctt	192
Ile	Asn	Tyr	Asn	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	
	30				35				40					45		
gag	tgg	atg	gga	gct	att	ttt	cca	gga	aat	ggg	ttt	act	tcc	tac	aat	240
Glu	Trp	Met	Gly	Ala	Ile	Phe	Pro	Gly	Asn	Gly	Phe	Thr	Ser	Tyr	Asn	

	50		55		60	
cag aag ttc aag ggc aga gtc acc att acc gtc gac aag tcc acg agc	288					
Gln Lys Phe Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser						
65	70	75				
aca gcc tac atg gag ctg agc agc ctg aga tct gag gac acg gcc gtg	336					
Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val						
80	85	90				
tat tac tgt gcg aga gat ggt gac tat tac ttt gac tac tgg ggc cag	384					
Tyr Tyr Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln						
95	100	105				
gga acc ctg gtc acc gtc tcc tca g	409					
Gly Thr Leu Val Thr Val Ser Ser						
110	115	117				

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<211> 87

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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cctcagtcac aatatcc 87

<210> 40

<211> 93

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

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<211> 85

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic DNA

<400> 41

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<211> 84

<212> DNA

<213> Artificial Sequence

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<400> 42
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gaagcttagg ggctttccct ggtt 84

<210> 43
<211> 94
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<213> Artificial Sequence

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<400> 43
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tgaagatttt gcaacttatt actgtcagca gtgg 94

<210> 44
<211> 91
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 44
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<210> 45
<211> 385
<212> DNA
<213> Artificial Sequence

<220>
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<220>
<221> CDS
<222> (1)..(384)

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-22 -20 -15 -10
gtc ata ata tcc aga gga gat atc cag atg acc cag tct cca tcc tcc 96
Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
-5 -1 1 5 10
ctg tct gca tct gta gga gac aga gtc acc atc act tgt agt gct agc 144
Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
15 20 25
tca agt gtc agt tac atg cac tgg tat cag cag aaa cca ggg aaa gcc 192
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
30 35 40
cct aag ctt ctg atc tat gac aca tcc aaa ctg cct tct ggg gtc cca 240
Pro Lys Leu Leu Ile Tyr Asp Thr Ser Lys Leu Pro Ser Gly Val Pro
45 50 55
tca agg ttc agc ggc agt gga tct ggg aca gat ttc act ctc acc atc 288

Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	
60			65			70										
agc	agc	ctg	cag	cct	gaa	gat	ttt	gca	act	tat	tac	tgt	cag	cag	tgg	336
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln	Trp	
75			80			85			90							
agt	agt	aac	cca	ccc	acg	ttc	ggc	caa	ggg	acc	aag	gta	gag	atc	aaa	384
Ser	Ser	Asn	Pro	Pro	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys	
		95			100			105	106							
c									385							

<210> 46
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 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 46
 caggaaacag ctatgacgaa ttccaccatg gatttttcagg tgcagatttt cagcttcctg 60
 ctaatcagt cctcagtc atg 84

<210> 47
 <211> 96
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 47
 agttgatggg ggcctctctg cccagagaca cagccaggga gtctggagac tgggtcatca 60
 cgatgtctcc tctggacatt atgactgagg cactga 96

<210> 48
 <211> 85
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 48
 cgagagggcc accatcaact gcagtgccag ctcgagtgtg agttacatgc actggtacca 60
 gcagaaacca ggacagcctc ctaag 85

<210> 49
 <211> 87
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 49
 cagacccgct gccactgaat cggtcaggga cccagaagc caggttggat gttctgtaaa 60
 tgagcagctt aggaggctgt cctggtt 87

<210> 50
<211> 86
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 50
attcagtggc agcgggtctg ggacagattt cactctcacc atcagcagcc tgcaggctga 60
agacgtcgca gtttattact gtcac 86

<210> 51
<211> 90
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 51
gttttccag tcacgaccgt acgtttgatc tccaccttgg tcccttggcc gaacgtgtac 60
atactccact gatgacagta ataaactgcg 90

<210> 52
<211> 379<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<220>
<221> CDS
<222> (1)..(378)

<400> 52
atg gat ttt cag gtg cag att ttc agc ttc ctg cta atc agt gcc tca 48
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
-22 -20 -15 -10
gtc ata atg tcc aga gga gac atc gtg atg acc cag tct cca gac tcc 96
Val Ile Met Ser Arg Gly Asp Ile Val Met Thr Gln Ser Pro Asp Ser
-5 -1 1 5 10
ctg gct gtg tct ctg ggc gag agg gcc acc atc aac tgc agt gcc agc 144
Leu Ala Val Ser Leu Gly Glu Arg Ala Thr Ile Asn Cys Ser Ala Ser
15 20 25
tcg agt gta agt tac atg cac tgg tac cag cag aaa cca gga cag cct 192
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Gln Pro
30 35 40
cct aag ctg ctg att tac aga aca tcc aac ctg gct tct ggg gtc cct 240
Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
45 50 55
gac cga ttc agt ggc agc ggg tct ggg aca gat ttc act ctc acc atc 288
Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
60 65 70
agc agc ctg cag gct gaa gac gtc gca gtt tat tac tgt cat cag tgg 336
Ser Ser Leu Gln Ala Glu Asp Val Ala Val Tyr Tyr Cys His Gln Trp

75	80	85	90	
agt atg tac acg ttc ggc caa ggg acc aag gtg gag atc aaa c				379
Ser Met Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys				
	95	100	104	

<210> 53
 <211> 8
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 53
 ctctagag 8

<210> 54
 <211> 60
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 54
 cagtgttctt ggctgtgcaa aaagtggagg catttttcat aatagaaggt gcctacgtag 60

<210> 55
 <211> 67
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 55
 gatcctacgt aggcaccttc tattatgaaa aatgcctcca cttttgcaca gccagaaca 60
 ctgcatg 67

<210> 56
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 56
 GTATAATGAG CGGCCGCG 18

<210> 57
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 57
 gatccgcggc cgctcattat ac 22

<210> 58
 <211> 56
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 58
 gaaggaaaca gaaggcgcca tctatatatt tattcgaggt accaatataa tcatag 56

<210> 59
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 59
 aaactgactt ggccggcgcc atttatgtct 30

<210> 60
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 60
 cataaatcct ataggtacca acgacaacta 30

<210> 61
 <211> 87
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 61
 caggaaacag ctatgacgaa ttccaccatg gattttcaag tgcagatttt cagcttcctg 60
 ctaatcagtg cctcagtcac aatatcc 87

<210> 62
 <211> 93
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic DNA

<400> 62
aagtgatggg gactctgtct cctacagatg cagacaggga ggatggagac tgggtcatct 60
ggatatctcc tctggatatt atgactgagg cac 93

<210> 63
<211> 8
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 63
agacagagtc accatcactt gtagtgccag ctcgagtgtg agttacatgc actggtatca 60
gcagaaacca gggaaagccc ctaag 85

<210> 64
<211> 84
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 64
atccactgcc gctgaacctt gatgggaccc cagaagccag gttggatggt ctatagatca 60
gaagcttagg ggctttccct ggtt 84

<210> 65
<211> 94
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 65
aaggttcagc ggcagtggat ctgggacaga tttcactctc accatcagca gcctgcagcc 60
tgaagatttt gcaacttatt actgtcatca gtgg 94

<210> 66
<211> 85
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 66
gttttcccag tcacgaccgt acgtttgatc tctaccttgg tcccttggcc gaacgtgtac 60
atactccact gatgacagta ataag 85

<210> 67
<211> 379
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Synthetic DNA

<220>

<221> CDS

<222> (1)..(378)

<400> 67

```
atg gat ttt caa gtg cag att ttc agc ttc ctg cta atc agt gcc tca 48
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
-22      -20      -15      -10
gtc ata ata tcc aga gga gat atc cag atg acc cag tct cca tcc tcc 96
Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
-5      -1  1      5      10
ctg tct gca tct gta gga gac aga gtc acc atc act tgt agt gcc agc 144
Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
      15      20      25
tcg agt gta agt tac atg cac tgg tat cag cag aaa cca ggg aaa gcc 192
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
      30      35      40
cct aag ctt ctg atc tat aga aca tcc aac ctg gct tct ggg gtc cca 240
Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
      45      50      55
tca agg ttc agc ggc agt gga tct ggg aca gat ttc act ctc acc atc 288
Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
      60      35      70
agc agc ctg cag cct gaa gat ttt gca act tat tac tgt cat cag tgg 336
Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Trp
      75      80      85      90
agt atg tac acg ttc ggc caa ggg acc aag gta gag atc aaa c      379
Ser Met Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
      95      100      104
```

<210> 68

<211> 80

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 68

```
caggaaacag ctatgactcc ggagctgagg tgaagaagcc tggggcctca gtgaaggctc 60
cctgcaaggc ttctggatac      80
```

<210> 69

<211> 80

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 69

```
ccactcaagc ccttgctccag gggcctgtcg caccagtgac atattgtaat taatgaaggc 60
gtatccagaa gccttgccagg      80
```

<210> 70
<211> 81
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 70
ctggacaagg gcttgagtgg atgggagcta tttttccagg aaatggtttt acttcctaca 60
atcagaagtt caagggcaga g 81

<210> 71
<211> 79
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 71
tctcaggctg cgcagctgca tgtaggctgt gctcgtggac ttgtcgacgg taatgggtgac 60
tctgcccttg aacttctga 79

<210> 72
<211> 83
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 72
tgcagctgcg cagcctgaga tctgaggaca cggccgtgta tttctgtgcy agagatggty 60
actattactt tgactactgg ggc 83

<210> 73
<211> 81
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 73
gttttccag tcacgacggg cccttggtgg aggctgagga gacggtgacc agggttccct 60
ggccccagta gtcaaagtaa t 81

<210> 74
<211> 409
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<220>

<221> CDS

<222> (1)..(408)

<400> 74

```
atg gga ttc agc agg atc ttt ctc ttc ctc ctg tca gtg act aca ggt 48
Met Gly Phe Ser Arg Ile Phe Leu Phe Leu Leu Ser Val Thr Thr Gly
-19 -15 -10 -5
gtc cac tcc cag gtg cag ctg gtg cag tcc gga gct gag gtg aag aag 96
Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
-1 1 5 10
cct ggg gcc tca gtg aag gtc tcc tgc aag gct tct gga tac acc ttc 144
Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
15 20 25
att aat tac aat atg cac tgg gtg cga cag gcc cct gga caa ggg ctt 192
Ile Asn Tyr Asn Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
30 35 40 45
gag tgg atg gga gct att ttt cca gga aat ggt ttt act tcc tac aat 240
Glu Trp Met Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn
50 55 60
cag aag ttc aag ggc aga gtc acc att acc gtc gac aag tcc acg agc 288
Gln Lys Phe Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser
65 70 75
aca gcc tac atg cag ctg cgc agc ctg aga tct gag gac acg gcc gtg 336
Thr Ala Tyr Met Gln Leu Arg Ser Leu Arg Ser Glu Asp Thr Ala Val
80 85 90
tat ttc tgt gcg aga gat ggt gac tat tac ttt gac tac tgg ggc cag 384
Tyr Phe Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln
95 100 105
gga acc ctg gtc acc gtc tcc tca g 409
Gly Thr Leu Val Thr Val Ser Ser
110 115 117
```

<210> 75

<211> 87

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 75

```
caggaaacag ctatgacgaa ttccaccatg gattttcaag tgcagatttt cagcttcctg 60
ctaatacgtg cctcagtcac aatatcc 87
```

<210> 76

<211> 93

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic DNA

<400> 76

```
aagtgatggt gacctcctct cctacagatg cagacagggg ggatggagac tgggtcatct 60
ggatatctcc tctggatatt atgactgagg cac 93
```

<210> 77

<211> 85
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 77
agaggaggtc accatcactt gtagtgccag ctcgagtgtg agttacatgc actgggatca 60
gcagaaacca gggaaagccc ctaag 85

<210> 78
<211> 84<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 78
atccactgcc gctgaacctt gatgggaccc cagaagccag gttggatgtt ctatagatca 60
gaagcttagg ggctttccct gggt 84

<210> 79
<211> 94
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 79
aaggttcagc ggcagtggat ctgggacatt ttatactctc accatcagca gcctgcagcc 60
tgaagatttt gcaacttatt actgtcatca gtgg 94

<210> 80
<211> 85
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<400> 80
gttttcccag tcacgaccgt acgtttgatc tctaccttgg tcccttggcc gaacgtgtac 60
atactccact gatgacagta ataag 85

<210> 81
<211> 379
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic DNA

<220>
<221> CDS
<222> (1) .. (378)

<400> 81

```
atg gat ttt caa gtg cag att ttc agc ttc ctg cta atc agt gcc tca 48
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
-22 -20 -15 -10
gtc ata ata tcc aga gga gat atc cag atg acc cag tct cca tcc tcc 96
Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
-5 -1 1 5 10
ctg tct gca tct gta gga gag gag gtc acc atc act tgt agt gcc agc 144
Leu Ser Ala Ser Val Gly Glu Glu Val Thr Ile Thr Cys Ser Ala Ser
15 20 25
tcg agt gta agt tac atg cac tgg tat cag cag aaa cca ggg aaa gcc 192
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
30 35 40
cct aag ctt ctg atc tat aga aca tcc aac ctg gct tct ggg gtc cca 240
Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
45 50 55
tca agg ttc agc ggc agt gga tct ggg aca ttt tat act ctc acc atc 288
Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Phe Tyr Thr Leu Thr Ile
60 65 70
agc agc ctg cag cct gaa gat ttt gca act tat tac tgt cat cag tgg 336
Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys His Gln Trp
75 80 85 90
agt atg tac acg ttc ggc caa ggg acc aag gta gag atc aaa c 379
Ser Met Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
95 100
```

<210> 82

<211> 138

<212> PRT

<213> Mus musculus

<220>

<223>

<400> 82

```
Met Glu Trp Asn Trp Val Val Leu Phe Leu Leu Ser Leu Thr Ala Gly
-19 -15 -10 -5
Val Tyr Ala Gln Gly Gln Met Gln Gln Ser Gly Ala Glu Leu Val Lys
-1 1 5 10
Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Pro Ser Gly Phe Thr Phe
15 20 25
Ser Ser Asn Tyr Ile Ser Trp Leu Lys Gln Lys Pro Gly Gln Ser Leu
30 35 40 45
Glu Trp Ile Ala Trp Ile Tyr Ala Gly Thr Gly Asp Ala Ser Tyr Asn
50 55 60
Gln Lys Phe Thr Ala Lys Ala His Val Thr Val Asp Thr Ser Ser Ser
65 70 75
Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Thr Glu Asp Ser Ala Ile
80 85 90
Tyr Tyr Cys Ala Arg His Gly Gly Asp Gly Tyr Trp Phe Ala Tyr Trp
95 100 105
Gly Gln Gly Thr Leu Val Thr Val Ser Ala
110 115 119
```

<210> 83

<211> 128

<212> PRT
<213> Mus musculus

<220>
<223>

<400> 83
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
-22 -20 -15 -10
Val Ile Ile Ser Arg Gly Gln Leu Val Leu Thr Gln Ser Pro Ala Ile
-5 -1 1 5 10
Met Ser Ala Ser Gln Gly Glu Lys Val Thr Met Thr Cys Ser Ala Ser
15 20 25
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Ser Gly Thr Ser
30 35 40
Pro Lys Arg Trp Ile Tyr Asp Thr Ser Lys Leu Pro Ser Gly Val Pro
45 50 55
Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile
60 65 70
Ser Ser Met Glu Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Trp
75 80 85 90
Ser Ser Asn Pro Pro Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
95 100 105 106

<210> 84
<211> 136
<212> PRT
<213> Mus musculus

<220>
<223>

<400> 84
Met Gly Phe Ser Arg Ile Phe Leu Phe Leu Leu Ser Val Thr Thr Gly
-19 -15 -10 -5
Val His Ser Gln Ala Phe Leu Gln Gln Ser Gly Ala Glu Leu Val Arg
-1 1 5 10
Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe
15 20 25
Ile Asn Tyr Asn Met His Trp Val Lys Gln Thr Pro Arg Gln Gly Leu
30 35 40 45
Glu Trp Ile Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn
50 55 60
Gln Lys Phe Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
65 70 75
Thr Val Tyr Met Gln Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val
80 85 90
Tyr Phe Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln
95 100 105
Gly Thr Thr Leu Thr Val Ser Ser
110 115 117

<210> 85
<211> 126
<212> PRT
<213> Mus musculus

<220>

<223>

<400> 85

Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
-22 -20 -15 -10
Val Ile Met Ser Arg Gly Gln Ile Val Leu Thr Gln Ser Pro Ala Ile
-5 -1 1 5 10
Met Ser Ala Ser Leu Gly Glu Glu Ile Thr Leu Thr Cys Ser Ala Ser
15 20 25
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Ser Gly Thr Ser
30 35 40
Pro Lys Leu Leu Ile Tyr Arg Thr Ser Asn Leu Ala Ser Gly Val Pro
45 50 55
Phe Arg Phe Ser Gly Ser Gly Ser Gly Thr Phe Tyr Ser Leu Thr Ile
60 65 70
Ser Ser Val Glu Ala Glu Asp Ala Ala Asp Tyr Tyr Cys His Gln Trp
75 80 85 90
Ser Met Tyr Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
95 100 104

<210> 86

<211> 140

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanized antibody

<400> 86

Met Glu Trp Asn Trp Val Val Leu Phe Leu Leu Ser Leu Thr Ala Gly
-19 -15 -10 -5
Val Tyr Ala Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
-1 1 5 10
Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
15 20 25
Ser Ser Asn Tyr Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
30 35 40 45
Glu Trp Met Gly Trp Ile Tyr Ala Gly Thr Gly Asp Ala Ser Tyr Asn
50 55 60
Gln Lys Phe Thr Ala Arg Val Thr Ile Thr Val Asp Thr Ser Thr Ser
65 70 75
Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
80 85 90
Tyr Tyr Cys Ala Arg His Gly Gly Asp Gly Tyr Trp Phe Ala Tyr Trp
95 100 105
Gly Gln Gly Thr Leu Val Thr Val Ser Ser
110 115 119

<210> 87

<211> 136

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanized antibody

<400> 87

```
Met Gly Phe Ser Arg Ile Phe Leu Phe Leu Leu Ser Val Thr Thr Gly
-19          -15          -10          -5
Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
      -1  1          5          10
Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
      15          20          25
Ile Asn Tyr Asn Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
      30          35          40          45
Glu Trp Met Gly Ala Ile Phe Pro Gly Asn Gly Phe Thr Ser Tyr Asn
              50          55          60
Gln Lys Phe Lys Gly Arg Val Thr Ile Thr Val Asp Lys Ser Thr Ser
              65          70          75
Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
              80          85          90
Tyr Tyr Cys Ala Arg Asp Gly Asp Tyr Tyr Phe Asp Tyr Trp Gly Gln      95
100          105
Gly Thr Leu Val Thr Val Ser Ser
110          115          117
```

<210> 88

<211> 128

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanized antibody

<400> 88

```
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
-22  -20          -15          -10
Val Ile Ile Ser Arg Gly Asp Ile Gln Met Thr Gln Ser Pro Ser Ser
      -5          -1  1          5          10
Leu Ser Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Ser Ala Ser
      15          20          25
Ser Ser Val Ser Tyr Met His Trp Tyr Gln Gln Lys Pro Gly Lys Ala
      30          35          40
Pro Lys Leu Leu Ile Tyr Asp Thr Ser Lys Leu Pro Ser Gly Val Pro
      45          50          55
Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
      60          65          70
Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln Trp
      75          80          85          90
Ser Ser Asn Pro Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
      95          100          105 106
```

<210> 89

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanized antibody

<400> 89

```
Met Asp Phe Gln Val Gln Ile Phe Ser Phe Leu Leu Ile Ser Ala Ser
-22          -20          -15          -10
```

Val	Ile	Met	Ser	Arg	Gly	Asp	Ile	Val	Met	Thr	Gln	Ser	Pro	Asp	Ser	
-5					-1	1				5					10	
Leu	Ala	Val	Ser	Leu	Gly	Glu	Arg	Ala	Thr	Ile	Asn	Cys	Ser	Ala	Ser	
			15						20					25		
Ser	Ser	Val	Ser	Tyr	Met	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Pro	
		30					35					40				
Pro	Lys	Leu	Leu	Ile	Tyr	Arg	Thr	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro	
	45						50					55				
Asp	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	
	60					65					70					
Ser	Ser	Leu	Gln	Ala	Glu	Asp	Val	Ala	Val	Tyr	Tyr	Cys	His	Gln	Trp	
	75				80					85					90	
Ser	Met	Tyr	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys			
				95					100				104			

<210> 90

<211> 126

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanized antibody

<400> 90

Met	Asp	Phe	Gln	Val	Gln	Ile	Phe	Ser	Phe	Leu	Leu	Ile	Ser	Ala	Ser	
-22		-20					-15					-10				
Val	Ile	Ile	Ser	Arg	Gly	Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	
	-5				-1	1				5					10	
Leu	Ser	Ala	Ser	Val	Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Ser	Ala	Ser	
			15						20					25		
Ser	Ser	Val	Ser	Tyr	Met	His	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	
		30					35						40	Pro	Lys	Leu
Arg	Thr	Ser	Asn	Leu	Ala	Ser	Gly	Val	Pro							Ile
		45					50					55				Tyr
Ser	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	
	60					65					70					
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	His	Gln	Trp	
	75			80					85						90	
Ser	Met	Tyr	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu	Ile	Lys			
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<210> 91

<211> 136

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Humanized antibody

<400> 91

Met	Gly	Phe	Ser	Arg	Ile	Phe	Leu	Phe	Leu	Leu	Ser	Val	Thr	Thr	Gly	
-19				-15					-10						-5	
Val	His	Ser	Gln	Val	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Lys	Lys	
		-1	1				5					10				
Pro	Gly	Ala	Ser	Val	Lys	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	
	15					20					25					
Ile	Asn	Tyr	Asn	Met	His	Trp	Val	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	

